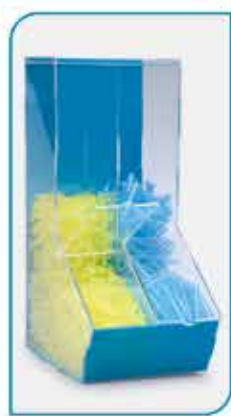




*volumetric measurement
& liquid handling*



volumetric measurement & liquid handling

blank production



State of the art automatic welding and attaching machines are used for connecting the glass parts to each other.

ISOLAB is one of the few manufacturers that produces its own blank products.

Glass tubes are blown by highly skilled blowers to ensure the uniform wall thickness, exact shape and dimensions according to DIN standards.

After rigorous controls, all blanks are sent to tunnel furnaces where the stress on the blanks is eliminated under controlled heating and cooling process.

This process ensures the optimum mechanical stability and inhibits the effect of temperature fluctuations.



Glass tubes are blown by highly skilled blowers to ensure the uniform wall thickness, exact dimensions according to DIN standards.

joint production



All joints are manufactured by automatic forming machines for consistent quality and guaranteed uniformity.

ISOLAB manufactures all joints with automatic machines with guaranteed uniformity.

During the grinding process, only diamond tools are used to ensure perfect results.

The taper of the joints are tested with precise taper angle control machine to ensure the taper quality.

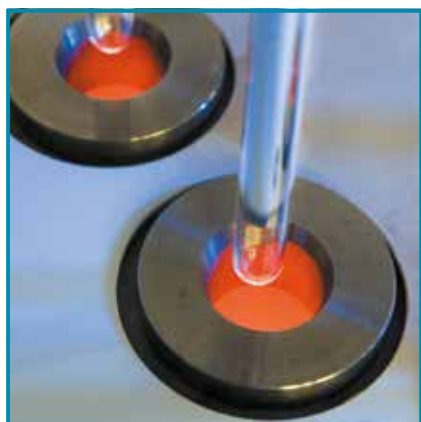
This process ensures ending up with accurately tapered, smoothly finished, absolutely leak-proof and interchangeable ground joints.

The tightness also tested with vacuum test machines.



Grinding steps are performed by diamond reamers assuring best results with highest precision.

calibrated tubing production



Glass tubings are slowly and gradually heated up to half-melting level. Then they are shrunk around steel rods with precise diameter.

Most of the burette manufacturers use ordinary tubings which are more tolerant in terms of wall thickness and inside diameter.

ISOLAB burette tubings are manufactured by using vacuum technology to maintain inside diameter of the burette tubings uniform all over their length.

First tubings are slowly and gradually heated up to half-melting level.

Then they are shrunk around steel rods with precise diameter under vacuum condition for uniform wall thickness and diameter.



Burette tubings are manufactured by using vacuum technology to maintain diameter of the burette tubings uniform all over their length.

volumetric measurement & liquid handling

printing process

ISOLAB uses the most advanced printing machines for achieving the highest printing quality.

These machines guarantee high contrast and sharp printing providing precise reading.

All used screen stencils are stretchable.

The stretchable screen stencils easily stretched to match the calibration marks so that the volume precision is maintained at all volume levels.

Specially formulated blue, white or amber colored enamels are used during printing process.



Only high contrasted and fine printing allows precise reading of scaled products such as cylinders, burettes, pipettes etc.

ISOLAB DIN 'A' In 20°C 2000 ml : 1.400 NS 2932-9090 3.3 DE-M 19

According to DIN standards the information listed hereunder is required to be printed on the bodies of products.

- Brand name
- Nominal capacity
- Class degree
- Calibration temperature
- Matching standards
- Possible error limits
- Batch numbers
- Production date
- Warnings, etc

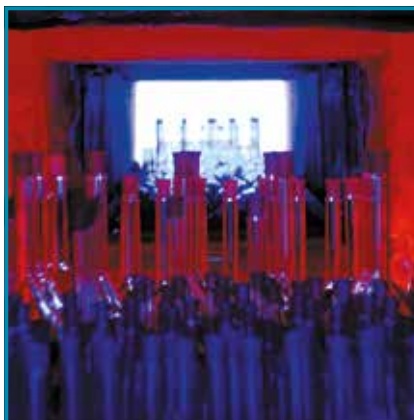
annealing process

Furnace process is the last step to reach a perfect product.

In order to achieve, stress-free products with highest level of printing quality precise controlled gradual heating and cooling is essential.

At **ISOLAB**, all heating and annealing steps are carried with state-of-art temperature controlled tunnel furnaces.

For these reasons all **ISOLAB** glassware are stress-free, mechanically strong and ever lasting printed.



In order to achieve the best results, the furnace has a precise temperature control all-over the thermal heating zone.



Furnace is entirely controlled by electronic panel for guaranteed temperature control at all steps.

packing process

ISOLAB is perfectly aware that the products used in laboratory should be very clean and excellently packed.

All glassware are washed in industrial scale ultrasonic cleaning machines for removing all the dirt and left over particles.

Our staff responsible for the final quality control of the packaging is extremely qualified and well experienced.

High quality packing materials are used to ensure break-free delivery of the products.



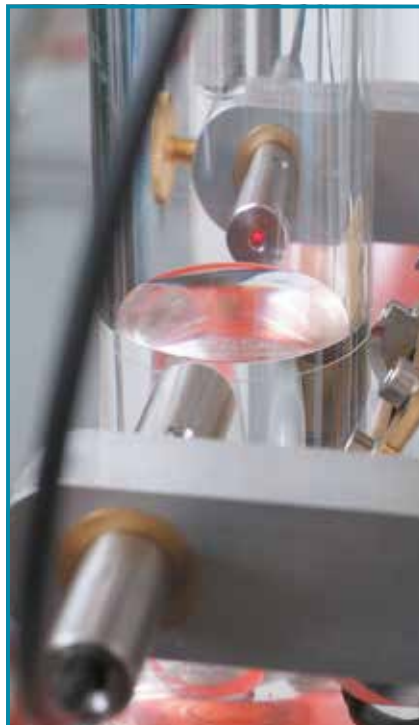
Modern industrial scale ultrasonic cleaning machines guarantee perfect removal of all remaining dirt and particles.



The final step of the packing is also the final step of quality control process.

volumetric measurement & liquid handling

calibration



Meniscus is determined automatically at the exact lowest level by a laser beam.

Manual calibration done by an operator carries high risk of mistakes and is not reliable.

All calibration steps are carried out with fully automatic robots.

These robotic machines guarantee the highest level of precision and accuracy.

Although during the calibration process the room temperature environment is kept stable at 20°C any slight change in the room temperature is automatically compensated by the machines.

Meniscus is automatically determined at the exact lowest level by a laser beam.

Application of the meniscus ring line is done by stretching the glass surface for longer persistence with the help of a diamond tool. Later the stretched ring line is stained with either blue or white enamel paint for easy observation of meniscus line.



Filling the blank products with water is done automatically by the calibration machines.

quality control



Steps such as filling the water, finding the meniscus line and controlling the volume are done automatically.

Manual quality control of volumetric products is also very complex and time consuming. Also, manual quality control done by an operator carries high risk of mistakes and is not reliable.

In order to avoid above mentioned risks and to achieve the best reliable results quality control steps are carried out with fully automatic robots which are only used by very few selected manufacturers.

Quality control robot is featured with a high resolution camera and image processing system for the most precise meniscus level control.

Steps such as filling the water, finding the meniscus line and controlling the volume are done automatically.

The balances and the electronic calibrated thermometers are in-line connected to the system for online data transfer.

The operator simply mounts the volumetric glass to the quality control robot and waits for the precision guaranteed outcome.



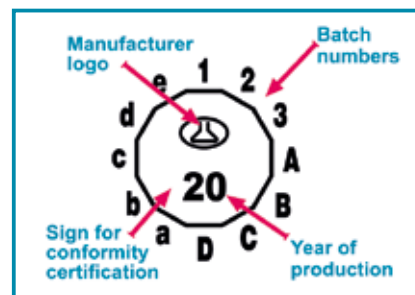
The operator simply mounts the volumetric glass to the quality control robot and waits for the precision guaranteed outcome.

“**Conformity**” is the compliance of the product with the exact and legal standards defined by German Federal Weights and Measures (Eichordnung) Regulation.

The “conformity testing and certification” is described in detail on **DIN 12600** standard.

According to German law of metrology, only listed accredited manufacturers such as **ISOLAB** with a guaranteed quality assurance are allowed to certify the conformity by printing the conformity logo (**DE-M**) on self manufactured volumetric products.

The manufacturer’s logo should also be printed along with the conformity logo. We are very proud of having this logo printed on our related products as a guarantee of conformity according to **DIN 12600** standard starting from day one.



batch certification

“**Batch certificate**” shows the determined mean value of the controlled standard deviation and tolerance of volumetric products batch to batch.

After the production of each batch, the mandatory minimum quantity is randomly tested and certified according to **DIN 12600** standard.

The “**batch certificate**” comprises the date of production, mean value, standard deviation, permitted tolerance and other information.

By tracking the batch number user can reach the related batch certificate.

Batch numbers and related certificates can be downloaded from our **ISOLAB** web site. Users can print the “**batch certificate**” online with the following steps:

For downloading the certificate please enter www.isolab.de web site, and
➤ select “downloads/support” from the menu ➤ select the product code number from “obtain certificates” section ➤ select the batch number printed on the body ➤ certificate page comes automatically ➤ print the page by selecting “printer version” on the left corner.



quality certification

An “**individual quality certificate**” can also be issued for volumetric products.

“**Quality certificate**” shows the final and ultime tested factors of the volumetric products.

Such a certificate is always well accepted worldwide since it should be prepared by a worldwide accredited test laboratory.

The selected product is individually tested in the most precise way and controlled as defined by German Federal Weights and Measures (Eichordnung) Regulation and according to **DIN 12600** standard.

Individually prepared and printed quality certificate comprising the date of production, mean value, standard deviation, permitted tolerance and other informations.



volumetric measurement & liquid handling

classification

All volumetric products are always calibrated as **to contain (In)** or **to deliver (Ex)**.

They are classified in three groups; **Class "B"** or **Class "A"** or **"AS"**.

Class "A" and **"AS"** carry exactly the same error and tolerance limits.

The difference is in their "delivery" and "waiting times". "S" means quick (swift) delivery.

The classification as **"A"** or **"B"** indicates the degree of accuracy of related parameters.

Class **"A"** or **"AS"** volumetric products carry highest level of accuracy and specially well accepted by laboratories looking for quality.

The error limits, accuracy and variations are always in accordance with relevant **ISO** or **DIN** standard limits.

delivery time

Delivery time is the time needed to deliver the liquid from the starting level to the final level.

For burettes and pipettes final level is generally the tip of the product.

waiting time

The waiting time starts after complete transfer is finalised.

After the transfer of the liquid usually liquid continues to flow down from the burette or pipette wall.

For accurate volume measurement attention must be paid to the waiting time.

Specially with pipettes the residual drop accumulated at the tip should be considered.

meniscus line

A simple definition of meniscus is the curve on the surface of the liquid.

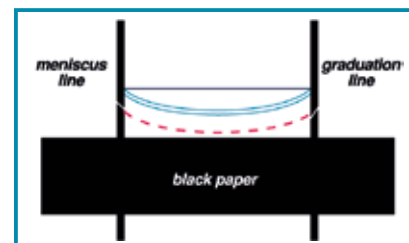
According to **DIN**, **ISO** and most other standards volume should be read at the lowest liquid level.

The lowest level of the meniscus has to touch the upper edge of the graduation mark.

On the volumetric glassware the form of the meniscus is concave.

For the exact and most precise results, the eye of the observer must be exactly at the same level of meniscus line.

To have a better, faster and more accurate reading and measurement, a black strip should be held at the back side, just below of the graduation mark and meniscus line.



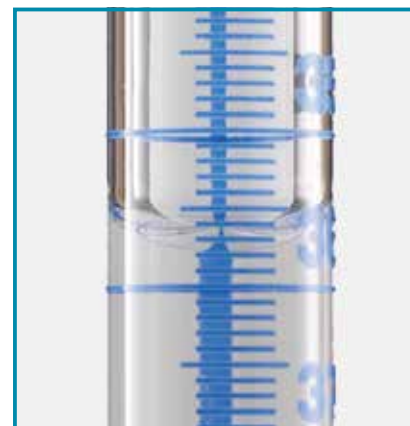
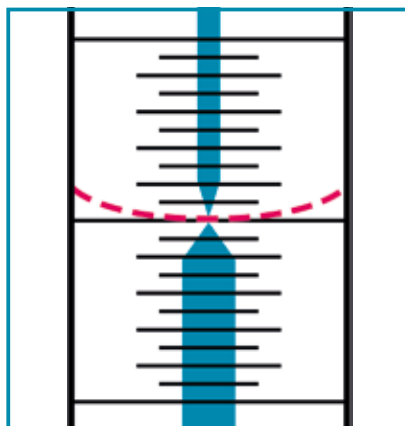
schellbach stripe

The schellbach stripe is a narrow blue band which takes place at the center of a wider white band on the burette tube background.

Mostly printed at the backside of the burette tube for easier observation of meniscus line.

The penetrated light fraction two arrow head points that appear at the meniscus line.

Exact meniscus line is exactly where two arrow heads touch each other.



how to use volumetric flasks

- Volumetric flasks are mainly used for preparation of highly accurate solutions.
- First add the exact weight of the product inside the flask. Fill the flask about half the volume and mix the content.
- Then fill again until the level reaches a bit lower than calibration ring mark.
- Adjust the temperature of flask and the content to 20°C.
- Add a little more liquid so that the meniscus will be exactly at the same level of the ring mark.
- Pay attention to read the meniscus at the eye level also not to wet the inner neck wall above the ring mark.



how to use measuring cylinders

- Cylinders are mainly used for the exact measurement of liquid volumes.
- First fill the cylinder with liquid and wait until the residual liquid on the wall will filter down.
- Then read the volume level from the cylinders volume graduation chart.
- Pay attention to read the volume level at the eye level. Do not wet the inner neck wall above the calibration mark.



how to use mixing cylinders

- Mixing cylinders are mainly used for the exact measurement of liquid volumes.
- First fill the cylinder with liquid and wait until the residual liquid on the wall to filter down.
- Then read the volume level from the cylinders volume graduation chart.
- Later add the precise weight of the substance and dissolve it by shaking the cylinder.



how to use burettes

- Fill the burette a bit higher than the "0" level.
- To activate the stopcock, drain the solution but never below the "0" mark.
- Pay attention there will be no air bubbles left in the burette.
- Fill more solution above 10 mm of the "0" mark. Do not wet the burette wall above the liquid level.
- By focusing the meniscus at eye level drain the solution to the exact "0" mark.
- Wipe off the drops at the stopcock tip and slowly start the titration. When color changes stop the titration and wait for the 30 seconds.
- Wipe off the remaining drop since this is also the part of the measured volume.



how to use pipettes

- Fill the liquid max 5 mm above the volume mark. Wipe off the outer surface of the pipette.
- Hold the pipette at eye level and place the tip to the wall of a beaker with a slight angle.
- Discharge the access volume until the meniscus reaches the calibration mark.
- When the level of the liquid reaches to the tip wait according to waiting time.
- When the waiting time is over, wipe the tip gently pulling upwards on the beaker wall and transfer the liquid.
- If there is still any residual liquid left in the tip, never blow out.



how to use density bottles

- Carefully weigh the empty and well dried density bottle.
- Fill the bottle up to 2/3 of the neck level while avoiding air bubbles.
- Adjust the bottle temperature to 20°C in a thermostatic bath. Insert the stopper of the bottle carefully. The capillary of the stopper will discharge the liquid.
- Dry the body of the bottle and the stopper carefully by wiping with a tissue paper. Pay attention not to remove any liquid from the capillary tube.
- The liquid inside of the bottle should exactly be at the same level with the upper end of the capillary tube.
- Final step is weighing the filled density bottle and calculating the density.



volumetric measurement & liquid handling

VOLUMETRIC FLASKS - "glass" - "class A" "conformity certified"



VOLUMETRIC FLASKS - "glass" - "class A" "conformity certified" - "COATED"



➤ Manufactured from heat resistant borosilicate 3.3 glass according to DIN EN ISO 1042 standard. Dark amber flasks with code 014.11 are manufactured from neutral glass 5.4. Calibrated by automatic robots according to DIN/ISO Class "A" standard.

➤ Conformity mark ("DE-M") and batch number printed on the body surface. Batch certificate can be downloaded from website.

➤ Blue and white colored diamond grinded meniscus ring mark offers longer persistence. Inscriptions on the flask bodies are printed with long lasting enamel color.

➤ Flasks are supplied with a leak-proof P.E stopper which ensures perfect closure.

➤ When handling dangerous and/or valuable solutions coated volumetric flasks are highly recommended.

➤ Bodies of these flasks are coated with a special formulated coating which reduces the impacts and also minimize the possible risks in case of breakage. Coating covers the body like a protective glove and holds the broken parts unscattered.

➤ The coating is highly transparent and can resist up to 135°C with maximum period of 30 minutes. Coated flasks should not be exposed directly to open flame.

➤ All other technical specifications are identical with standard body volumetric flasks.

flasks clear	flasks amber	flasks dark amber	volume	neck NS size	pack quantity
013.01.005	014.01.005	014.11.005	5 ml	NS 10/19	2 pieces
013.01.010	014.01.010	014.11.010	10 ml	NS 10/19	2 pieces
013.01.020	014.01.020	014.11.020	20 ml	NS 10/19	2 pieces
013.01.025	014.01.025	014.11.025	25 ml	NS 10/19	2 pieces
013.01.026	014.01.026	014.11.026	25 ml	NS 12/21	2 pieces
013.01.050	014.01.050	014.11.050	50 ml	NS 12/21	2 pieces
013.01.051	014.01.051	014.11.051	50 ml	NS 14/23	2 pieces
013.01.100	014.01.100	014.11.100	100 ml	NS 12/21	2 pieces
013.01.101	014.01.101	014.11.101	100 ml	NS 14/23	2 pieces
013.01.150			150 ml	NS 14/23	2 pieces
013.01.200	014.01.200	014.11.200	200 ml	NS 14/23	2 pieces
013.01.250	014.01.250	014.11.250	250 ml	NS 14/23	2 pieces
013.01.300			300 ml	NS 14/23	2 pieces
013.01.400			400 ml	NS 19/26	2 pieces
013.01.500	014.01.500	014.11.500	500 ml	NS 19/26	2 pieces
013.01.901	014.01.901	014.11.901	1000 ml	NS 24/29	2 pieces
013.01.902	014.01.902	014.11.902	2000 ml	NS 29/32	2 pieces
013.01.905			5000 ml	NS 34/35	1 piece
013.01.910			10000 ml	NS 45/40	1 piece

coated clear flasks	coated amber flasks	volume	neck NS size	pack quantity
013.01.005C	014.01.005C	5 ml	10/19	2 pieces
013.01.010C	014.01.010C	10 ml	10/19	2 pieces
013.01.020C	014.01.020C	20 ml	10/19	2 pieces
013.01.025C	014.01.025C	25 ml	10/19	2 pieces
013.01.026C	014.01.026C	25 ml	12/21	2 pieces
013.01.050C	014.01.050C	50 ml	12/21	2 pieces
013.01.051C	014.01.051C	50 ml	14/23	2 pieces
013.01.100C	014.01.100C	100 ml	12/21	2 pieces
013.01.101C	014.01.101C	100 ml	14/23	2 pieces
013.01.150C		150 ml	14/23	2 pieces
013.01.200C	014.01.200C	200 ml	14/23	2 pieces
013.01.250C	014.01.250C	250 ml	14/23	2 pieces
013.01.300C		300 ml	14/23	2 pieces
013.01.400C		400 ml	19/26	2 pieces
013.01.500C	014.01.500C	500 ml	19/26	2 pieces
013.01.901C	014.01.901C	1000 ml	24/29	2 pieces
013.01.902C	014.01.902C	2000 ml	29/32	2 pieces

150 ml, 300 ml, 400 ml volumetric flasks are in addition to DIN range.

150 ml, 300 ml, 400 ml and 10000 ml volumetric flasks are in addition to DIN range.

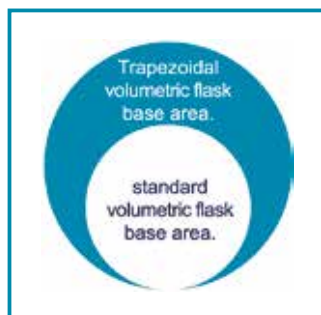
VOLUMETRIC FLASKS - "glass" - "class A" - "conformity certified" - "trapezoidal"



Small size flasks with standard body shape can fall over very easily due to their smaller center of gravity.

Compared to other standard volumetric flasks of the same volume, trapezoidal flasks have at least twice base area.

For this reason trapezoidal flasks are much more stable than standard flasks.



- Manufactured from heat resistant, borosilicate glass 3.3 according to DIN EN ISO 1042 standard.
- Trapezoidal body form offers much higher stability and avoids fall over risk.
- Calibrated according to DIN/ISO Class "A" standard. Featured with a ("DE-M") conformity mark according to German Federal Weights and Measures Regulations.
- Individual calibration carried out by automatic robots eliminate possible deviations from nominal values.
- Conformity mark and batch number printed on the body surface. Batch certificate can be downloaded from website.
- Diamond grinded meniscus ring mark offers longer persistence and enables easy observation of meniscus level.
- Inscriptions on the flask bodies are printed with long lasting enamel color.
- All volumetric flasks are supplied with a leak-proof P.E stopper which ensures perfect closure.

clear flasks	amber flasks	volume	neck NS size	pack quantity
013.13.001	013.15.001	1 ml	07/16	2 pieces
013.13.002	013.15.002	2 ml	07/16	2 pieces
013.13.003	013.15.003	3 ml	07/16	2 pieces
013.13.004	013.15.004	4 ml	07/16	2 pieces
013.13.005	013.15.005	5 ml	07/16	2 pieces
013.13.010	013.15.010	10 ml	10/19	2 pieces
013.13.020	013.15.020	20 ml	10/19	2 pieces
013.13.025	013.15.025	25 ml	10/19	2 pieces
013.13.050	013.15.050	50 ml	12/21	2 pieces

VOLUMETRIC FLASKS - "PP" - "class B"



- Manufactured according to DIN EN ISO 1042 standard from clear polypropylene. Resistant to most acids, bases and many commonly used solvents.
- Calibrated according to DIN/ISO Class "B" standard.
- Clear flasks are manufactured from very clear polypropylene resulting high transparency and clear indication of meniscus line.
- Amber flasks are manufactured from special formulated polypropylene preventing UV light penetration into the flask yet still offering high transparency.
- All volumetric flasks are supplied with a leak-proof P.E stopper which ensures perfect closure.
- For consistent accuracy should not be used with liquids over 60°C or kept under direct sunlight for long periods.

clear flasks	amber flasks	volume	neck NS size	pack quantity
014.03.025	014.13.025	25 ml	10/19	1 piece
014.03.050	014.13.050	50 ml	12/21	1 piece
014.03.100	014.13.100	100 ml	14/23	1 piece
014.03.250	014.13.250	250 ml	14/23	1 piece
014.03.500	014.13.500	500 ml	19/26	1 piece
014.03.901	014.13.901	1000 ml	24/29	1 piece

volumetric measurement & liquid handling

CYLINDERS - "glass" - "class A" - "conformity certified"



► Manufactured from heat resistant borosilicate 3.3 glass according to DIN EN ISO 4788 standard. Calibrated by automatic robots according to DIN/ISO Class "A" standard.

► Conformity mark ("DE-M") and batch number printed on the body surface. Batch certificate can be downloaded from website.

► Inscriptions on the flask bodies are printed with long lasting enamel color.

► Flawless spout design assures pouring without any drips.

► Hexagonal base with strengthened knobs ensures increased stability.

► Mixing cylinders are supplied with a P.E stopper.

measuring cylinders	mixing cylinders	volume	pack quantity
015.01.005		5 ml	2 pieces
015.01.010	016.01.010	10 ml	2 pieces
015.01.025	016.01.025	25 ml	2 pieces
015.01.050	016.01.050	50 ml	2 pieces
015.01.100	016.01.100	100 ml	2 pieces
015.01.250	016.01.250	250 ml	2 pieces
015.01.500	016.01.500	500 ml	2 pieces
015.01.901		1000 ml	2 pieces
	016.01.901	1000 ml	1 piece
015.01.902		2000 ml	1 piece

CYLINDERS "class B" - "P.P base"



► Manufactured from heat resistant, durable borosilicate glass according to DIN/ISO Class "B" standard.

► These cylinders are supplied with an interchangeable polypropylene base.

► Thick and durable polypropylene base reduces the risk of breakage during use and cleaning.

► Base perfectly fits the cylinder body and can easily be dismantled.

► Flawless spout design assures pouring without any drips.

► Inscriptions on the cylinder body are printed with white enamel.

catalogue number	volume	pack quantity
016.07.010	10 ml	2 pieces
016.07.025	25 ml	2 pieces
016.07.050	50 ml	2 pieces
016.07.100	100 ml	2 pieces
016.07.250	250 ml	2 pieces
016.07.500	500 ml	2 pieces
016.07.901	1000 ml	2 pieces

CYLINDERS - "polypropylene" - "class B"



► Manufactured according to DIN/ISO Class "B" standard from polypropylene.

► Featured with excellent transparency, high chemical and remarkable heat resistance.

► Calibrated according to DIN/ISO Class "B" standard.

► Flawless spout design assures pouring without drips.

► Thick hexagonal base with strengthened knobs ensures increased stability.

► For consistent accuracy, should not be used with liquids over 60°C or kept under direct sunlight for long periods.

► Inscriptions and nominal values are either in embossed scale or in printed blue scale.

embossed scale	printed scale	volume	pack quantity
016.05.010	016.06.010	10 ml	1 piece
016.05.025	016.06.025	25 ml	1 piece
016.05.050	016.06.050	50 ml	1 piece
016.05.100	016.06.100	100 ml	1 piece
016.05.250	016.06.250	250 ml	1 piece
016.05.500	016.06.500	500 ml	1 piece
016.05.901	016.06.901	1000 ml	1 piece

BURETTES - “straight” - “class AS” - “conformity certified”



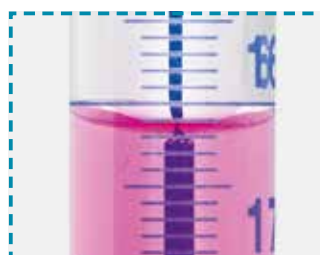
➤ Manufactured from pre-vacuum calibrated borosilicate 3.3 tubing according to ISO 385 standard. Calibrated according to DIN/ISO Class “AS” standard.

➤ Conformity mark (“DE-M”) and batch number printed on the body surface. Batch certificate can be downloaded from website.

➤ Supplied with an interchangeable PTFE stopcock with identical keys which does not need “matching the pairs” during cleaning.

➤ Inscriptions and nominal values are printed with long lasting enamel color.

➤ Schellbach stripe featured with a narrow blue band which is at the center of the larger white band offers easier and accurate observation of the meniscus line.



The schellbach stripe has a narrow blue band which is at the center of the larger white band.

The light fraction creates two arrow head points which appear at the meniscus line level.

Meniscus reading point is exactly where these two arrow heads meet each other.

clear burettes W/O schellbach	clear burettes with schellbach	amber burettes W/O schellbach	volume	pack quantity
017.02.010	017.01.010	018.01.010	10 ml	1 piece
017.02.025	017.01.025	018.01.025	25 ml	1 piece
017.02.050	017.01.050	018.01.050	50 ml	1 piece

AUTOMATIC BURETTES - “class AS” - “conformity certified”



➤ Manufactured from pre-vacuum calibrated borosilicate 3.3 tubing according to ISO 385 standard. Calibrated according to DIN/ISO Class “AS” standard.

➤ Conformity mark (“DE-M”) and batch number printed on the body surface. Batch certificate can be downloaded from website.

➤ Featured with an intermediate PTFE stopcock and with a PTFE “needle” valve stopcocks.

➤ Clear burettes are featured with a schellbach stripe for easier and accurate observation of the meniscus line.

➤ Inscriptions and nominal values are printed with long lasting enamel color.

➤ **Automatic burettes are supplied without bottles and bellow. Bottles and bellows should be ordered separately.**



All automatic burettes are featured with an intermediate PTFE stopcock for reliable, fast and accurate measurement.

clear burettes	amber burettes	volume	pack quantity
019.01.010	019.05.010	10 ml	1 piece
019.01.025	019.05.025	25 ml	1 piece
019.01.050	019.05.050	50 ml	1 piece

volumetric measurement & liquid handling

SCHILLING BURETTES - "class AS"



➤ Manufactured from pre-vacuum calibrated borosilicate 3.3 tubing according to ISO 385 standard. Calibrated according to DIN/ISO Class "AS" standard.

➤ Conformity mark ("DE-M") and batch number printed on the body surface. Batch certificate can be downloaded from website.

➤ Clear schilling burettes are featured with a schellbach stripe.

➤ Supplied with a PTFE "needle" valve stopcock. Inscriptions and nominal values are printed with long lasting enamel color.

clear burettes	amber burettes	volume	pack quantity
020.03.010	020.05.010	10 ml	1 piece
020.03.025	020.05.025	25 ml	1 piece
020.03.050	020.05.050	50 ml	1 piece

features of Schilling burettes

Schilling burettes are described as an alternative automatic burette specially suitable for field analysis where there is always a risk of breakage.

Schilling burette set consists of a burette tubing similar to glass automatic burette and a polyethylene reservoir bottle with a stabilising stand.

Offers a rapid filling by squeezing the polyethylene reservoir bottle and fast titration through valve stopcock.

ACCESORIES for BURETTES



BOTTLES - "for automatic burettes"

➤ Manufactured from thick glass with 2000 ml volume.

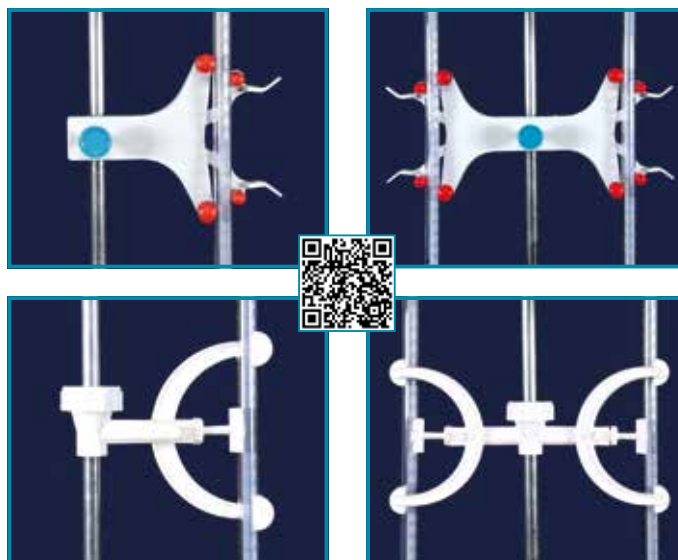
➤ Grinded neck with NS 29/32 socket size perfectly fits to automatic burette's cone.

clear bottles	amber bottles	pack quantity
020.07.010	020.07.025	1 piece

BELLOW - "for automatic burettes"

➤ Manufactured from natural rubber. Tube diameter perfectly fits to all connectors.

catalogue number	bulb type	pack quantity
020.08.001	single	1 piece



CLAMPS - "for straight burettes"

➤ Manufactured to hold one or two straight burette at a time. They firmly hold the burettes on position and offer an easy observation of volume graduations and meniscus level.

➤ Clamps can be used on rods of diameter 10 mm to 12 mm.

➤ Fixing heads are featured with flexible springs that offers easy insertion and extraction of the burettes.

catalogue number	clamp type	for holding	pack quantity
018.05.001	steel	1 burette	1 piece
018.05.002	steel	2 burettes	1 piece
018.06.001	polypropylene	1 burette	1 piece
018.06.002	polypropylene	2 burettes	1 piece

volumetric measurement & liquid handling

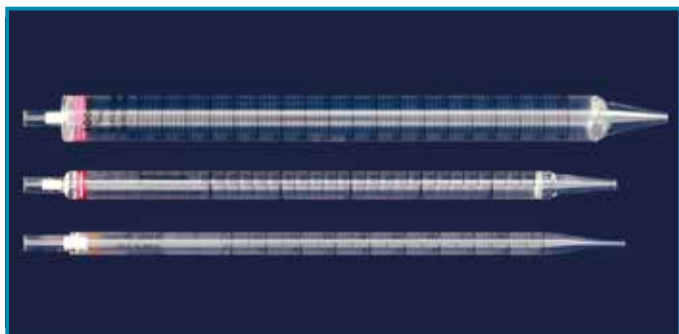
PIPETTES - "pasteur" - "polyethylene"



- Manufactured from low density polyethylene. Uniform wall thickness guarantees uniform suction force at all times and offers reproducible drop sizes for each use.
- Ideal for transferring and dispensing liquids safely eliminating the risk of cross contamination.
- Pipette bulb requires very small pressure force. Long and flexible stem can be bent to draw liquids from narrow vessels.
- Featured with embossed volume graduations on the body.

catalogue number	volume	product descriptions	packing specifications	pack quantity
084.02.001	3 ml	non-sterilized	in box	500 pieces
084.22.001	3 ml	gamma sterilized	single pack	100 pieces
084.02.003	1 ml	non-sterilized	in box	500 pieces
084.22.003	1 ml	gamma sterilized	single pack	100 pieces

PIPETTES - "serological" - "polystyrene"



- Manufactured from virgin polystyrene with excellent optical transparency. Sterilized with gamma irradiation. Free of RNase, DNase, DNA and pyrogene.
- Smooth interior prevents cell-hanging and clumping inside the pipette wall. Pipette tip offers constant reproducible flow.
- Optimised mouthpiece perfectly fits to all types of pipette pumps and balls.
- Colour coded ring mark at suction stem allows fast identification and sourcing.
- The sharp, black, highly visible permanent graduations guarantee precise reading.

catalogue number	pipette volume	color code	box quantity
083.13.001	1 ml	yellow	500 pieces
083.13.002	2 ml	green	500 pieces
083.13.005	5 ml	blue	200 pieces
083.13.010	10 ml	orange	200 pieces
083.13.025	25 ml	red	150 pieces
083.13.050	50 ml	purple	100 pieces
083.13.100	100 ml	pink	50 pieces

DISPENSER BOX - "large"

- Manufactured from crystal clear acrylic with excellent field of vision.
- Ideal for storing and dispensing relatively large scale products such as pasteur pipettes.
- Featured with non-skid silicone feet for stable stand.
- Featured with an easy opening hinged lid. Once opened, the lid stands open for easy dispensing.
- Box offers safe and clean storage of pipettes without been effected from enviromental effects.
- Box external dimensions: 175x250x600 mm.



catalogue number	pack quantity
084.05.001	1 piece



PIPETTES - "pasteur" - "glass"



- Manufactured from neutral glass according to ISO 7712 standard.
- Thick walls provide extra strength eliminating the risk of breakage.
- Ideal for transferring and dispensing liquids safely eliminating the risk of cross contamination.
- Featured with a long drawn capillary tip. The design of the suction part allows cotton plugging.

catalogue number	length	pack quantity	box quantity
084.01.001	150 mm	250 pieces	4 packs
084.01.002	230 mm	250 pieces	4 packs

BULB - "for glass pasteur pipettes"



- Manufactured from natural rubber particularly to be used with glass pasteur pipettes.

catalogue number	pack quantity
084.03.001	100 pieces

volumetric measurement & liquid handling

PIPETTES - "glass" - "class AS" - "conformity certified"



➤ Manufactured from neutral tubing according to ISO 648 and DIN 12687 (for volumetric pipettes), ISO 835 and DIN 12699 (for graduated pipettes) standards.

➤ Calibrated according to DIN/ISO Class "AS" standard.

➤ Conformity mark ("DE-M") and batch number printed on the body surface. Batch certificate can be downloaded from website.

➤ Carefully formed and bevelled tips ensure proper flow rate. Color coded ring marks allows fast sourcing.

➤ Inscriptions and nominal values are printed with long lasting enamel color.

graduated pipettes	volumetric pipettes	volume	pack quantity
021.01.001	021.05.001	1 ml	10 pieces
021.01.002	021.05.002	2 ml	10 pieces
	021.05.003	3 ml	10 pieces
	021.05.004	4 ml	10 pieces
021.01.005	021.05.005	5 ml	10 pieces
021.01.010	021.05.010	10 ml	10 pieces
	021.05.011	11 ml	10 pieces
	021.05.015	15 ml	10 pieces
021.01.020	021.05.020	20 ml	10 pieces
021.01.025	021.05.025	25 ml	10 pieces
021.01.050	021.05.050	50 ml	10 pieces

STAND - "for pipettes" "carrousel"



➤ Manufactured from polypropylene for holding up to 94 pipettes vertically.

➤ The round carrousel stand can rotate 360° around stand axis enabling easy reach to each pipette.

➤ The grid patterned upper disc which is concentric with the carrier plate keeps the pipettes in vertical and correct position.

➤ The carrier plate consists of four concentric troughs with tapered sides and open bottoms which cradle the pipette tips protectively.

➤ Drained liquid is collected by a stationary rack at the bottom part.

catalogue number	height x diameter	pack quantity
022.01.001	48 x 23 cm	1 piece



The grid patterned upper disc which is concentric with the carrier plate keeps the pipettes in vertical and correct position.



The carrier plate consists of four concentric troughs with tapered sides and open bottoms which cradle the pipette tips protectively.

PIPETTES - "glass" - "class A"



➤ Manufactured from neutral tubing according to ISO 648 and DIN 12687 & ISO 835 and DIN 12699 standards.

➤ Calibrated according to DIN/ISO Class "A" standard.

➤ Carefully formed and bevelled tips ensure proper flow rate. Color coded ring marks allows fast sourcing.

➤ Inscriptions and nominal values are printed with long lasting amber stain.

graduated pipettes	volumetric pipettes	volume	pack quantity
021.11.001	021.15.001	1 ml	10 pieces
021.11.002	021.15.002	2 ml	10 pieces
021.11.005	021.15.005	5 ml	10 pieces
021.11.010	021.15.010	10 ml	10 pieces
	021.15.015	15 ml	10 pieces
021.11.020	021.15.020	20 ml	10 pieces
021.11.025	021.15.025	25 ml	10 pieces
021.11.050		50 ml	10 pieces

Color coded ring mark at suction stem allows fast identification and sourcing.



STAND - "linear"



➤ Manufactured from polypropylene for holding up to 12 pipettes horizontally. Easily dismantlable for storage and cleaning purposes.

catalogue number	pack quantity
022.02.001	1 piece

BOX - "for pipettes"



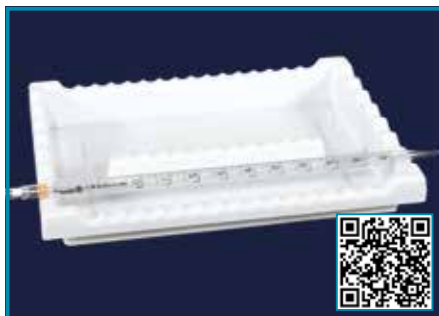
➤ Manufactured from AISI 304 stainless steel with rectangular form. The total box height is not adjustable.

➤ Supplied with a silicone pad that fits to the box base.

➤ Silicone pad acts as a shock absorber and prevents the risk of breakage.

catalogue number	box base dimensions	box height	pack quantity
022.04.001	70x70 mm	210 mm	1 piece
022.04.002	70x70 mm	430 mm	1 piece

TRAY - "for pipettes"



➤ Manufactured from polystyrene for easy organisation of all kind of pipettes.

➤ Crenated design enables holding of large size pipettes in longitudinal direction and short size pipettes in transverse direction.

catalogue number	dimensions	pack quantity
022.03.001	285 x 215 x 40 mm	1 piece

BOX - "for pipettes"



➤ Manufactured from aluminium with cylindrical body form. For to carry pipettes with different height during autoclave sterilisation process. The total box height is adjustable.

➤ Supplied with a silicone pad that fits to the box base. Silicone pad acts as a shock absorber and prevents the risk of breakage.

catalogue number	box diameter	min. & max. box height	pack quantity
022.03.002	60 mm	145-235 mm	1 piece
022.03.003	60 mm	280-420 mm	1 piece

TRAY - "for pipettes"



➤ Manufactured from polystyrene for easy organisation of all kind of pipettes.

➤ 1-2-5 and 10 ml pipettes can be stored at 4 different compartments. Can also be used in drawers as well as on bench tops.

catalogue number	dimensions	pack quantity
022.03.011	300 x 425 x 30 mm	1 piece

RACK - "for pipettes"



➤ Manufactured from acrylic for easy organisation of all kinds of pipettes.

➤ 4 shelves guarantee easy and fast reach of all pipettes between 1 ml to 50 ml size with in arm's reach.

➤ Angled design of the pipette shelves prevents the risk of pipettes falling out even the shelf is fully filled.

➤ Featured with magnetic clamps on both sides for arrangement of multiple box assembly.

catalogue number	dimensions	pack quantity
022.06.001	290x90x400 mm	1 piece

volumetric measurement & liquid handling

PIPETTE FILLERS - "pi-pump"



➤ A simple yet practical pipette filler for all pipettes from 2 ml to 25 ml volume range.

➤ Even very small volumes can be dispensed precisely.

➤ Pipette stem smoothly fits to the flexible silicone chuck and are firmly hold in position.

➤ Rotating the existing handwheel on the body upwards draws the liquid precisely to the desired level.

➤ Rotating the handwheel downwards let the liquid in the pipette discharge partially.

➤ A slight pressure applied to the fast release lever let the liquid flow-out for complete delivery.



catalogue number	for pipette volume	pack quantity
011.01.002	up to 2 ml	1 piece
011.01.010	up to 10 ml	1 piece
011.01.025	up to 25 ml	1 piece



PIPETTE FILLERS - "maxi"



➤ Advance pipette filler for all pipettes from 1 ml to 100 ml volume range.

➤ The optimised valve system allows easy draw of liquid without excess pressure.

➤ Pipette stem smoothly fits to the flexible silicone chuck and are firmly hold in position.

➤ Very easy to use; before attaching the pipette first squeeze the silicone bulb and release the air inside.

➤ Attach the pipette. Move the pipetting knob up-ward for filling, down-ward for discharging.

➤ For blow-out just push the discharge bellow.

➤ A replaceable hydrophobic membrane filter in the intake cone prevents cross contamination.

catalogue number	product descriptions
011.02.003	pipette filler
011.02.003.3	spare filter



PIPETTE FILLER - "macro"



Standard pipette filler for up to 10 ml pipettes.

➤ Bulb manufactured from natural rubber. Most common pipette filler for all types of pipettes up to 100 ml volume. Standard model can be used up to 10 ml pipettes. Universal model can be used up to 100 ml pipettes.

➤ Evacuation can be easily done by pressing the related automatic valves. Offers an easy single hand use. Pressing the valve the liquid is drawn-up to the desired level, dispensed partially or blown-out.

catalogue number	model	for pipettes	pack quantity
011.02.001	standard	up to 10 ml	1 piece
011.02.002	universal	up to 100 ml	1 piece



Universal pipette filler for up to 100 ml pipettes.

PIPETTE FILLER



➤ Simple and easily controllable pipette filler for all pipettes up to 15 ml volume.

➤ Very easy to use; First squeeze the bulb and release the air inside. Then attach the pipette. Release the bulb pressure and fill the pipette. For discharge squeeze the bulb again.

catalogue number	pack quantity
011.04.001	1 piece



catalogue number	for pipette volume	pack quantity
011.04.003	max 3 ml	10 pieces
011.04.005	max 5 ml	10 pieces
011.04.010	max 10 ml	10 pieces

PIPETTE FILLER

➤ Manufactured from silicone. Ideal for simple pipetting applications.

➤ Offered with three different volume capacity.



volumetric measurement & liquid handling

PIPETTE PUMP - "electrical"



- For all kinds of pipettes from 0,1 ml to 100 ml volume range.
- Ergonomic, light weight and well balanced body offers full comfort and fatigue-free pipetting.
- Powerful pump can fill a 25 ml pipette under 4 seconds.
- Pump speed can be adjusted to 8 different levels. LCD display visually shows the selected speed. Also offers gravimetric drain.
- Changeable lithium-ion batteries provide 8 hours continuous use. LCD display shows remaining battery power.
- The high-tech charger prevents over charging and provides long life cycle. 2-3 hours is required for full charge.
- Silicone adapter in the intake cone holds firmly the pipettes in position. Replaceable hydrophobic 0,45µm PTFE filter prevents cross contamination.
- Supplied with a wall mounting and a dual-position stand.

catalogue number	for pipettes	speed range	pack quantity
010.01.005	0,1 - 100 ml	adjustable	1 piece



Replaceable hydrophobic 0,45 µm PTFE filter secures cross contamination.
Catalogue No: 610.01.005

Silicone adapter in the intake cone holds firmly the pipettes in position.

PIPETTE PUMP - "electrical"



- For all kinds of pipettes from 0,1 ml to 100 ml volume range.
- Ergonomic, light weight and well balanced body offers full comfort and fatigue-free pipetting.
- Powerful pump can fill a 25 ml pipette under 4 seconds.
- Pump speed can be selected as high and low speed modes. Also offers gravimetric drain.
- Changeable lithium-ion batteries provide 8 hours continuous use. Featured with a visual red bulb low battery indicator.
- The high-tech charger prevents over charging and provides long life cycle. 2-3 hours is required for full charge.
- Silicone adapter in the intake cone holds firmly the pipettes in position. Replaceable hydrophobic 0,45µm PTFE filter prevents cross contamination.
- Supplied with a wall mounting and a single-position stand.

catalogue number	for pipettes	speed range	pack quantity
010.01.006	0,1 - 100 ml	adjustable	1 piece



Replaceable hydrophobic 0,45 µm PTFE filter secures cross contamination.
Catalogue No: 610.01.006

Silicone adapter in the intake cone holds firmly the pipettes in position.

volumetric measurement & liquid handling

DISPENSER - "repetitive"



- Ergonomically designed and light weight dispenser for fast and simple serial dispensing of liquids.
- Perfect tool for applications where repetitive dispensing is a must and where time is valuable.
- Very easy to use; first fill the dispenser tip with the liquid similar to a syringe. Then press the pipette button for each dispensing step.
- All functions can be controlled only by three control mechanisms.
- Offers 5 volume settings and 7 different dispenser tip sizes results with 35 alternative different volumes.
- Depending on the size & volume of the tip used - it is possible to dispense between 0,5 ml to 50 ml liquid in multi-interval.
- Works on the positive displacement principle which enables dispensing of even high density and high vapour liquids.
- Dispensing volume can be selected from the volume scale on the body.

catalogue number	pack quantity
008.06.001	1 piece

DISPENSER TIPS - "repetitive"

- Dispenser tips are manufactured from clear polypropylene.
- 7 different tip sizes offer 35 alternative different volumes.
- Graduation on the side of the tips enables visual confirmation of the volume.



Adapter for 25 & 50 ml tip should be ordered separately
Cat. No: 008.06.002

catalogue number	dispenser tip volume	pack quantity
008.06.005	0.50 ml	10 pieces
008.06.012	1.25 ml	10 pieces
008.06.025	2.50 ml	10 pieces
008.06.050	5.00 ml	10 pieces
008.06.125	12.50 ml	10 pieces
008.06.250	25.00 ml	10 pieces
008.06.500	50.00 ml	10 pieces
008.06.002	adapter for 25 & 50 ml	



volume	without re-circulation valve	pack quantity
0.3 - 2.5 ml	008.12.002	1 piece
0.5 - 5 ml	008.12.005	1 piece
1.0 - 10 ml	008.12.010	1 piece
2.5 - 30 ml	008.12.030	1 piece
5.0 - 60 ml	008.12.060	1 piece
10.0 - 100 ml	008.12.100	1 piece



DISPENSERS - "advanced model"

- Guarantees reliable results with bubble-free dispensing of liquids. Fully autoclavable body provides high precision with consistent delivery. Available in 6 volume ranges covering a range from 2,5 ml to 100 ml.
- Individually calibrated according to ISO 8655 standard and supplied with a calibration certificate.
- All wetted parts are PTFE, FEP, PFA and borosilicate glass ensuring highest degree of chemical resistance. Springless PTFE valve manifold ensures excellent chemical compatibility and leak-proof functioning.
- PTFE piston and viton "O" ring guarantees fatigue-free, smooth, effortless piston movement and high accuracy. Dosing cylinder is protected against breakage by a polypropylene sleeve.
- Large volume scale printed on both sides of the body guarantees fast, easy and precise volume readings.
- Adapter rotates freely 360° on the bottle neck and redirects the discharge to the desired position. Easy volume setting with 180° rotating volume adjustment knob.
- Supplied with 4 adaptors (28, 38, 40 & 45 mm diameter) to fit almost all available reservoir bottle necks.
- The telescopic extractable intake tube can be adjusted simply by pulling according to different bottle heights.
- Specially designed calibration tool is provided with each dispenser for convenient and fast user recalibration.

DISPENSERS - “advanced model” - “with re-circulation valve”



- Guarantees reliable results with bubble-free dispensing of liquids. Fully autoclavable body provides high precision with consistent delivery.
- Available in 6 volume ranges covering a range from 2,5 ml to 100 ml.
- Individually calibrated according to ISO 8655 standard and supplied with a calibration certificate.
- All wetted parts are PTFE, FEP, PFA and borosilicate glass ensuring highest degree of chemical resistance.
- Springless PTFE valve manifold ensures excellent chemical compatibility and leak-proof functioning.
- This also ensures wiper like movement of the piston making it suitable for all kinds of crystalline liquids.
- PTFE piston and viton “O” ring guarantees fatigue-free, smooth, effortless piston movement and high accuracy.
- Dosing cylinder is protected against breakage by a polypropylene sleeve.
- Large volume scale printed on both sides of the body guarantees fast, easy and precise volume readings.
- Adapter rotates freely 360° on the bottle neck and redirects the discharge to the desired position.
- Easy volume setting with 180° rotating volume adjustment knob.
- Discharge tube cap prevents drying and accidental dropping.
- Supplied with 4 adaptors (28, 38, 40 & 45 mm diameter) to fit almost all available reservoir bottle necks.
- The telescopic extractable intake tube can be adjusted simply by pulling according to different bottle heights.
- Specially designed calibration tool is provided with each dispenser for convenient and fast user recalibration.



Volume scale printed on both sides of the body guarantees precise volume readings.



Built in recirculation valve prevents reagent loss during purging,



Adapter rotates freely 360° on the bottle neck and redirects the discharge to the desired position.



Fast, easy and reliable volume setting with 180° rotating volume adjustment knob.



Discharge tube cap reduces contact with the air and prevents drying. Also prevents accidental dropping.



Supplied in a perfectly designed modern and sturdy box featured for compartments for every piece.

volume	with re-circulation valve	pack quantity
0.3 - 2.5 ml	008.15.002	1 piece
0.5 - 5 ml	008.15.005	1 piece
1.0 - 10 ml	008.15.010	1 piece
2.5 - 30 ml	008.15.030	1 piece
5.0 - 60 ml	008.15.060	1 piece
10.0 - 100 ml	008.15.100	1 piece

volumetric measurement & liquid handling

MICROPIPETTES - "adjustable volume"

- 9 models covers volume range from 0,25 µl to 10 ml and combines all the requirements of a modern pipette.
- Each pipette is individually calibrated according to ISO 8655 and certified. Supplied with an individual calibration certificate.
- Ultralight and well balanced body offers greatest comfort for extended pipetting periods.
- Contoured and ergonomic body shape fits perfectly to all hand sizes.
- Guarantees fast and easy volume setting with single hand. Volume display is always fully visible.
- Thumb friendly soft spring pipetting system reduce plunger pressure.
- Ergonomic finger hook offers comfortable handling and to take the weight for a more relaxed grip.
- Tip ejector with large pad reduces thumb pressure workload and guarantees easy tip ejection. (except 011.05.910)

non-autoclavable pipettes	autoclavable pipettes	volume range	pack quantity
011.06.002	011.05.002	0.1 - 2.5 µl	1 piece
011.06.010	011.05.010	0.5 - 10 µl	1 piece
011.06.020	011.05.020	2 - 20 µl	1 piece
011.06.050	011.05.050	5 - 50 µl	1 piece
011.06.100	011.05.100	10 - 100 µl	1 piece
011.06.200	011.05.200	20 - 200 µl	1 piece
011.06.901	011.05.901	100 - 1000 µl	1 piece
011.06.905	011.05.905	1000 - 5000 µl	1 piece
011.06.910	011.05.910	1000 - 10000 µl	1 piece



PIPETTING RESERVOIRS - "non-sterile & sterile" - "disposable"



Bottoms with a sloping "V" form and tapered in a narrow through.



- Manufactured from polystyrene featured with thick walls and crush-resistant corners as single, disposable use.
- Offers a clean, practical and economical alternative to all other re-usable pipetting reservoirs.
- Featured with a visible volume marking on the side wall.
- Large pour-back spouts at the corners guarantee safe pouring back the remaining liquid in to the original container.
- Easily stackable due to the tapered body form for reducing storage space. Liquid reservoirs do not stick to each other even stacked.
- Bottoms with a sloping "V" form and tapered in a narrow through guarantee maximum liquid recovery.

catalogue number	volume	product specifications	pack quantity
006.03.030	30 ml	non-sterile	100 pieces
006.13.030	30 ml	gamma sterile	10 pieces
006.03.055	55 ml	non-sterile	100 pieces
006.13.055	55 ml	gamma sterile	10 pieces
006.03.110	110 ml	non-sterile	100 pieces
006.13.110	110 ml	gamma sterile	10 pieces

MICROPIPETTES - "adjustable volume" - "autoclavable" - "for research"



- ▶ One pipette with exchangeable fix-volume controllers solves all your problems. Offer as single channel and 8 channel models.
- ▶ 9 models cover volume range from 0,2 µl to 10 ml and fulfill all the requirements of a modern pipette.
- ▶ Autoclavable, ultralight and well balanced body offers greatest comfort for extended pipetting periods.
- ▶ PP/PVDF/ anodised aluminium and stainless steel body construction guarantees the highest level of accuracy and precision.
- ▶ Dual "O" ring technology guarantees best tip fit. Outer "O" rings makes tip loading easy.
- ▶ Fast and easy volume setting with single hand. Volume setting requires 50% fewer turns compared to some brands.
- ▶ Volume lock prevents accidental volume changes during operation. Volume display is always fully visible.
- ▶ Thumb friendly soft spring pipetting system reduces plunger pressure by up to 50% and guarantees the whole procedure more comfortable.
- ▶ Ergonomic finger hook offers comfortable handling and to take the weight for a more relaxed grip.
- ▶ Color-coded tip ejector reduces thumb workload by 70 % compared with other brands.
- ▶ Large pad of tip ejector guarantees easy tip ejection.
- ▶ Each pipette is individually calibrated and certified. Serial number is printed on each pipette.

volume range	single channel	inaccuracy	imprecision %	8 channel	inaccuracy	imprecision %	color code	pack quantity
0.2 - 2.0 µl	011.20.002	12.00/2.00	6.00/1.00					1 piece
0.5 - 10 µl	011.20.010	2.50/1.00	1.80/0.50	011.21.010	5.00/2.00	3.60/1.00		1 piece
2 - 20 µl	011.20.020	5.00/1.00	1.50/0.30					1 piece
5 - 50 µl	011.20.050	2.00/1.00	1.20/0.30	011.21.050	3.20/1.40	1.60/0.60		1 piece
10 - 100 µl	011.20.100	2.50/0.70	1.00/0.20					1 piece
20 - 200 µl	011.20.200	2.50/0.60	0.70/0.20	011.21.200	1.80/1.20	0.80/0.40		1 piece
30 - 300 µl		1.66/1.40	0.60/0.30	011.21.300	1.66/1.40	0.60/0.30		1 piece
100 - 1000 µl	011.20.901	2.00/0.80	0.60/0.20					1 piece
1 - 5 ml	011.20.905	1.20/0.60	0.30/0.15					1 piece
1 - 10 ml	011.20.910	3.00/0.60	0.60/0.15					1 piece

volume lock feature



Select the desired volume and lock the indicator.

- ▶ Volume lock feature allows selecting the desired volume and locking the indicator to achieve a more reliable pipetting experience.
- ▶ Locking feature prevents accidental volume changes during pipetting procedures.
- ▶ Simply slide the button to the upper position to lock or lower to release.

dual "O" ring



Dual "O" ring technology: guarantees best tip fit.

- ▶ Outer "O" rings make tip loading easier. The first "O" ring creates a smooth seal while the second "O" ring creates a positive stop to ensure that the tips are airtight, sealed, and can be ejected with the smallest amount of force.

volumetric measurement & liquid handling



PIPETTE TIPS - "precision" - "for research"

- Manufactured from FDA approved polypropylene with consistent quality.
- Manufactured in fully automatic, human touch-free, clean room facilities as DNase, RNase, Pyrogen free. Certified on lot basis.
- Low retention is achieved by a special resin which offers minimum retention and maximum accuracy allowing complete retrieval of precious samples.
- Maximum sample recovery eliminates sample hold-up, providing the most accurate sample delivery.
- Exclusive molding technology reduces the sample loss, saves costly reagents and maximises accuracy and precision.
- Filtered tips prevents cross contamination from sample to sample by creating a physical barrier in the tip to inhibit and block aerosols.
- Optimised shape fits to all common pipettes to give perfect seal between the pipette tip and the pipette shaft.
- Different lengths within the same volume range for different applications.



Alternative packing options:

Puncture resistant bags:

- Base with a wide gusset enables self-standing and allows single-handed access.
- Heat sealed above the zip-lock closure, product integrity and cleanliness is assured right down to the last tip.

Durable boxes:

- Easy to open-close hinged lid boxes with internal rib structure provide an extremely strong platform.
- Features recessed wells to ensure perfect tip allignment.



catalogue number	product descriptions	packing specifications
T-B-010	pipette tip - ISOLAB - clear - 10 µl - bag	1000 pieces / bag
T-R-010	pipette tip - ISOLAB - clear - 10 µl - box	96 pieces / box
T-R-S-010	pipette tip - ISOLAB - clear - 10 µl - box - sterile	96 pieces / box
TF-010	pipette tip - filter - ISOLAB - clear - low retention - 10 µl - bag	1000 pieces / bag
TF-R-S-010	pipette tip - filter - ISOLAB - clear - low retention - 10 µl - box - sterile	96 pieces / box
T-B-011	pipette tip - ISOLAB - clear - long - 10 µl - bag	1000 pieces / bag
T-R-011	pipette tip - ISOLAB - clear - long - 10 µl - box	96 pieces / box
T-R-S-011	pipette tip - ISOLAB - clear - long - 10 µl - box - sterile	96 pieces / box
TF-011	pipette tip - filter - ISOLAB - clear - low retention - long - 10 µl - bag	1000 pieces / bag
TF-R-S-011	pipette tip - filter - ISOLAB - clear - low retention - long - 10 µl - box - sterile	96 pieces / box
TF-R-S-021	pipette tip - filter - ISOLAB - clear - low retention - long - 20 µl - box - sterile	96 pieces / box
TF-50	pipette tip - ISOLAB - with filter - clear - 50 µl - bag	1000 pieces / bag
TF-R-S-50	pipette tip - ISOLAB - clear - low retention - 50 µl - box - sterile	96 pieces / box
TF-100	pipette tip - filter - ISOLAB - clear - low retention - 100 µl - bag	1000 pieces / bag
TF-R-S-100	pipette tip - filter - ISOLAB - clear - low retention - 100 µl - box - sterile	96 pieces / box
T-B-200	pipette tip - ISOLAB - clear - 200 µl - bag	1000 pieces / bag
T-R-200	pipette tip - ISOLAB - clear - 200 µl - box	96 pieces / box
T-R-S-200	pipette tip - ISOLAB - clear - 200 µl - box - sterile	96 pieces / box
TF-200	pipette tip - filter - ISOLAB - clear - low retention - 200 µl - bag	1000 pieces / bag
TF-R-S-200	pipette tip - filter - ISOLAB - clear - low retention - 200 µl - box - sterile	96 pieces / box
T-B-300	pipette tip - ISOLAB - clear - 300 µl - bag	1000 pieces / bag
T-R-300	pipette tip - ISOLAB - clear - 300 µl - box	96 pieces / box
T-R-S-300	pipette tip - ISOLAB - clear - 300 µl - box - sterile	96 pieces / box
TF-300	pipette tip - filter - ISOLAB - clear - low retention - 300 µl - bag	1000 pieces / bag
TF-R-S-300	pipette tip - filter - ISOLAB - clear - low retention - 300 µl - box - sterile	96 pieces / box
T-B-1000	pipette tip - ISOLAB - clear - 1000 µl - bag	1000 pieces / bag
T-R-1000	pipette tip - ISOLAB - clear - 1000 µl - box	96 pieces / box
T-R-S-1000	pipette tip - ISOLAB - clear - 1000 µl - box - sterile	96 pieces / box
TF-1000	pipette tip - filter - ISOLAB - clear - low retention - 1000 µl - bag	1000 pieces / bag
TF-R-S-1000	pipette tip - filter - ISOLAB - clear - low retention - 1000 µl - box - sterile	96 pieces / box
T-B-1250	pipette tip - ISOLAB - clear - 1250 µl - bag	500 pieces / bag
T-R-1250	pipette tip - ISOLAB - clear - 1250 µl - box	96 pieces / box
T-R-S-1250	pipette tip - ISOLAB - clear - 1250 µl - box - sterile	96 pieces / box
TF-1250	pipette tip - filter - ISOLAB - clear - low retention - 1250 µl - bag	500 pieces / bag
TF-R-S-1250	pipette tip - filter - ISOLAB - clear - low retention - 1250 µl - box - sterile	96 pieces / box
TB-5000A	pipette tip - ISOLAB - clear - 5000 µl - bag	100 pieces / bag
TB-5000A-S	pipette tip - ISOLAB - clear - 5000 µl - bag - sterile	100 pieces / bag
TB-5000B	pipette tip - ISOLAB - clear - 5000 µl - bag	100 pieces / bag
TB-5000B-S	pipette tip - ISOLAB - clear - 5000 µl - bag - sterile	100 pieces / bag
TB-10000A	pipette tip - ISOLAB - clear - 10000 µl - bag	100 pieces / bag
TB-10000A-S	pipette tip - ISOLAB - clear - 10000 µl - bag - sterile	100 pieces / bag
TB-10000B	pipette tip - ISOLAB - clear - 10000 µl - bag	100 pieces / bag
TB-10000B-S	pipette tip - ISOLAB - clear - 10000 µl - bag - sterile	100 pieces / bag

maximum sample recovery



Isolab tip after dispensing 100 µl sample.

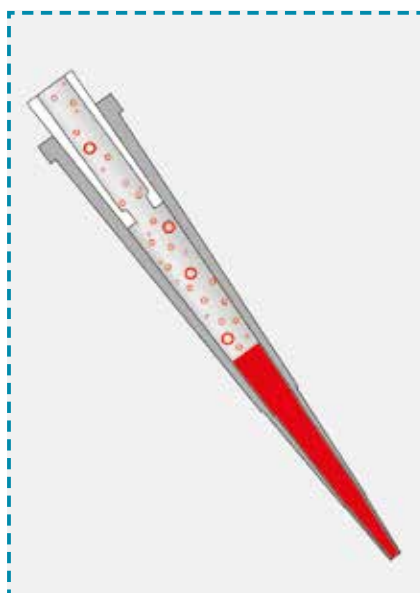
ISOLAB tips are made from low liquid retention resins that provides superior sample recovery while increasing accuracy and reproducibility.

- Allows for complete retrieval of precious samples.
- Saves costly reagents by reducing sample loss.
- Optimizes accuracy of the pipettor and also transfer of blood plasma.
- Avoids denaturation of nucleic acids and protein samples.



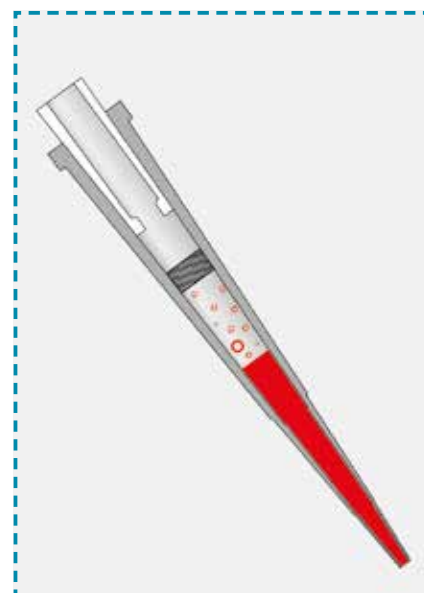
Other brand standart tip after dispensing 100 µl sample.

filter tips



ISOLAB filter tips offer the ultimate in protection against contamination.

- Filter barriers block aerosols by coalescing radioactive, chemical or biological contaminants before they can come in contact of pipettor shaft.
- Their usage is mostly essential in critical applications such as PCR, DNA sequencing and other techniques that involve the use of vaporous, biohazardous or corrosive material.
- Tip filters also act as a safety barrier against accidental over-pipetting of liquids without risk of sample lock-up.



PIPETTE TIPS - "economical"

➤ Manufactured from high quality pure polypropylene which is highly resistant to chemicals and thermal effects.

➤ Produced to match wide variety of pipettors for secure sealing and easy tip ejecting.

➤ Uniformity in size and shape allows perfect fitting with almost all micropipettes.

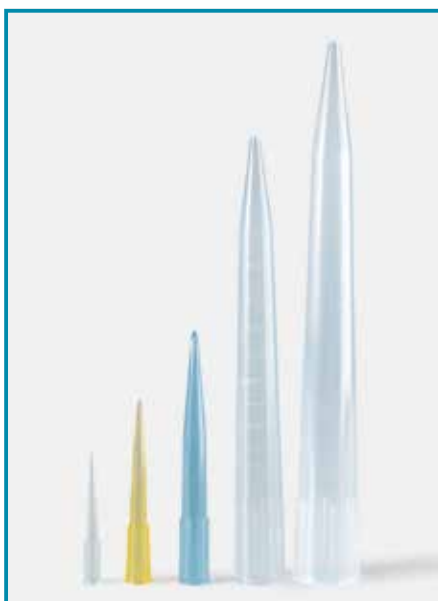
➤ Flashfree and uniform delivery orifice for consistent accuracy and reproducible sample delivery.

➤ Thin wall and small surface area at the tip minimize the possible tip retaining samples droplets.

catalogue number	capacity	color	pack quantity
005.01.001	10 µl	clear	1000 pcs
005.01.002	200 µl	yellow	1000 pcs
005.01.003	1000 µl	blue	500 pcs
005.01.004	5 ml	clear	250 pcs
005.01.005	10 ml	clear	100 pcs
005.01.015	10 ml	clear	100 pcs

➤ Please kindly order 005.01.005 pipette tips for 011.05.910

➤ Please kindly order 005.01.015 pipette tips for 011.06.910 and 011.20.910



volumetric measurement & liquid handling



STAND - "micropipette" "carrousel"

- Manufactured from polypropylene for using with most common micropipette brands.
- This space saving, robust stand can hold up to 6 pipettes comfortably.
- The round carrousel stand can rotate 360° around the axis enabling easy reach of any pipette.

catalogue number	base diameter	total height	pack quantity
006.11.005	160 mm	320 mm	1 piece



STAND - "micropipette" "linear"

- Manufactured from polypropylene for using with most common micropipette brands.
- Offers practical and easy direct access to micropipettes.
- This space saving, robust stand can hold up to 6 pipettes comfortably.



Linear micropipette stand can also hold multi-channel pipettes.

catalogue number	dimensions	pack quantity
006.11.006	143 x 290 x 290 mm	1 piece



STAND - "micropipette" "adjustable"

- Manufactured from acrylic with ergonomic angled body form with adjustable pipette holding option.
- Can be used with most pipette brands.
- Depending on the stand size enables easy holding and handling of 4 or 6 single channel pipettes.



The unique adjustable pipette holding design guarantees the use with different height pipettes.

catalogue number	dimensions	pack quantity
006.12.004	130 x 260 x 220 mm	1 piece
006.12.006	150 x 380 x 220 mm	1 piece



STAND - "micropipette" - "with bin"

- Manufactured from acrylic with a bin. The top support can hold 4 single channel pipettes.
- Generous opening of the bin provides easy and safe access to partitions.
- Cover is featured with easy opening sliding lid. Once opened, the lid stays open and enables easy filling and dispensing.
- Bin guarantees safe and clean storage of box pipette tips without been effected from dust, moisture and other environmental effects.
- Featured with non-skid silicone feet for safe and stable stand on the laboratory desks.

catalogue number	dimensions	pack quantity
006.05.001	200 x 178 x 173 mm	1 piece



Bin guarantees safe and clean storage of pipette tips without been effected from dust, moisture and other environmental effects.

Cover is featured with easy opening sliding lid. Once opened, the lid stays open and enables easy filling and dispensing.